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APPLICATION NO.	FILÎNG DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09/741,715	12/20/2000	Ryuki Tachibana	JP919990075US1	7535
7590 09/27/2004 Louis P. Herzberg			, EXAMINER	
			REVAK, CHRISTOPHER A	
Intellectual Prop IBM Corporation		ART UNIT	PAPER NUMBER	
P. O. Box 218 Yorktown Heights, NY 10598			2131	
			DATE MAILED: 09/27/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary Cristopher A. Revalx			Application No.	Applicant(s)				
Examiner	•			\mathcal{A}				
Christopher A. Revak 2131	Office Action Summary		<u> </u>					
Period for Repty A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ③ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Estancians of time may be available under the provisions of 3 CFR 1.13(d). In no event, however, may a reply be timely filed after the provisions of 3 CFR 1.13(d). In no event, however, may a reply be timely filed after SK (b) NOTH THE more than the maining date of this communication. Feature of the may be available under the provisions of 3 CFR 1.13(d). In no event, however, may a reply be timely filed after the statutory entries will be delication of the provision of the provision of the communication. From the provision of the provision of the provision of the maining date of the communication. From the provision of the provision of the provision of the maining date of the communication. From the provision of the provision of the maining date of the maining date of the communication. Provision of the provision of the provision of the maining date of the maining date of the communication. Provision of the provision of the provision of the maining date of the communication. Provision of the provision of the provision of the maining date of the maining date of the communication. Provision of the provision of the provision of the maining date of the communication. Provision of the provision of the provision of the provision of the maining date of the communication. Provision of the provisi		,						
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. - after SIX (9) MONTH'S from the mailing date of this communication. If the period for reply is specified above, the macrimum statutory principle will be the controlled by the period for reply is specified above, the macrimum statutory principle will not be that the principle of the period for reply is specified above, the macrimum statutory principle will not be that the principle of the principle of the period for reply is specified above, the macrimum statutory principle will not be that the principle of the principle of the principle will be considered timely. - If NO period for reply is specified above, the macrimum statutory principle will be deather principle of the principle will be considered timely fleet, may reduce a way. - Any reply received by the Office them afters most and refer the mailing date of this communication, swent timely fleet, may reduce any season and patent term adjustment. See 37 CFR 1.764(b). - Status 1) Responsive to communication(s) filled on 06 May 2003. 2a) This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1-12 is/are pending in the application. 4a) Of the above claim(s)		- The MAILING DATE of this communica	. 1	1				
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5. Patent and Trademark Office			6)					

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DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on May 6, 2003 is in compliance with the provisions of 37 CFR 1.97. The examiner is considering the information disclosure statement.

Priority

- Acknowledgment is made of applicant's claim for foreign priority under 35
 U.S.C. 119(a)-(d). Claim Rejections 35 USC § 102
- 3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- 4. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kabal et al, U.S. Patent 6,704,705.

As per claims 1 and 10, it is taught by Kabal et al of a system (means) and method for embedding additional information in compressed audio data. MDCT coefficients are extracted from compressed audio data. The MDCT coefficients are employed to calculate a frequency component for the compressed audio data.

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Additional information is embedded in the frequency components obtained in a frequency domain. The frequency components are transformed into MDCT coefficients with the additional information embedded therein. The MDCT coefficients, that include additional information embedded therein, are used to generate compressed audio data (col. 2, lines 14-58; col. 4, lines 7-27; and col. 4, line 63 through col. 5, line 20).

As per claims 2 and 11, Kabal et al of a system (means) and method for updating additional information in compressed audio data. MDCT coefficients are extracted from compressed audio data. The MDCT coefficients are employed to calculate a frequency component for the compressed audio data. Additional information is embedded in the frequency components obtained. The additional information in the frequency component is changed as needed. The frequency components are transformed into MDCT coefficients with the additional information embedded therein. The MDCT coefficients, that include additional information embedded therein, are used to generate compressed audio data (col. 2, lines 14-58; col. 4, lines 7-27; and col. 4, line 63 through col. 5, line 20).

As per claims 3 and 12, Kabal et al teaches of a system (means) and method for detecting additional information embedded in compressed audio data. MDCT coefficients are extracted from compressed audio data. The MDCT coefficients are employed to calculate a frequency component for the compressed audio data.

Additional information is detected from the obtained the frequency component (col. 2, lines 14-58; col. 4, lines 7-27; and col. 4, line 63 through col. 5, line 20).

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As per claims 4 and 13, Kabal et al discloses of a system (means) and method that calculate a frequency component for the compressed audio data using a precomputed table in which a correlation between MDCT coefficients and frequency components are included (col. 2, lines 14-58 and col. 11, line 63 through col. 12, line 11).

As per claims 5 and 14, it is taught by Kabal et al that a system (means) and method that transforms the frequency components into MDCT coefficients by using a precomputed table that includes a correlation between MDCT coefficients and frequency components (col. 2, lines 14-58 and col. 11, line 63 through col. 12, line 11).

As per claim 6, Kabal et al discloses that the system (means) embeds the additional information in the frequency domain by dividing an area for embedding one bit by the time domain, calculates a signal level for each the individual obtained area segments while embedding the additional data into the frequency domain in accordance with the lowest level available for each frequency (col. 4, lines 7-27).

As per claim 7, it is taught by Kabal et al of a window function and a window length employed for compressing audio data, a method for generating a table including a correlation between MDCT coefficients and frequency coefficients. A basis is generated that is used for performing a Fourier transform for a waveform along a time axis. A window function is multiplied by a corresponding waveform that is generated using the basis. An MDCT process is performed for the result obtained by the multiplication of the window function and calculating an MDCT coefficient and correlating the basis and the MDCT coefficient (col. 3, lines 43-64; col. 4, lines 45-55;

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col. 4, line 63 through col. 5, line 20; col. 11, line 63 through col. 12, line 11; and col. 19, lines 37-41).

As per claim 8, Kabal et al discloses that when multiplying the corresponding window function, a periodicity of the basis is employed to prevent generation of a redundant correlation between a frequency component and an MDCT coefficient (col. 11, line 63 through col. 12, line 11 and col. 15, lines 36-65).

As per claim 9, Kabal et al teaches that when multiplying the corresponding window function, the basis is divided into several segments so that redundant correlation between a frequency component and an MDCT coefficient are not generated (col. 4, lines 7-27; col. 11, line 63 through col. 12, line 11; and col. 15, lines 36-65).

As per claim 15, Kabal et al discloses of a computer readable program storage medium on which a program is stored for executing the table generation method in accordance with claim 7 (col. 1, lines 5-14 and col. 4, lines 38-47).

As per claim 16, Kabal et al teaches of a computer readable program storage medium on which a program is stored for executing the additional information and embedding method according to claim 10 (col. 1, lines 5-14 and col. 4, lines 38-47).

As per claim 17, Kabal et al recites of a computer readable program storage medium on which a program is stored for executing the additional updating method according the claim 11 (col. 1, lines 5-14 and col. 4, lines 38-47).

As per claim 18, Kabal et al discloses of a computer readable program storage medium on which a program is stored for executing the additional information detection method according the claim 12 (col. 1, lines 5-14 and col. 4, lines 38-47).

As per claim 19, Kabal et al teaches of an electronic watermarking apparatus. An information embedding device for embedding additional information in compressed audio data. A detection device for detecting said additional information from said compressed data. The information embedding device (means) includes extracting MDCT coefficients from the compressed audio data, employing the MDCT coefficients to calculate a frequency component for the compressed audio data, embedding additional information in the frequency component obtained a frequency domain, transforming the frequency components into MDCT coefficients that includes embedded additional information, and using MDCT coefficients, in which additional information is embedded, to generate compressed audio data. The detection device extracts MDCT coefficients from said compressed audio data, employs the MDCT coefficients to calculate a frequency component for the compressed audio data and for detecting when additional information in the frequency component that is obtained (col. 2, lines 14-58; col. 4, lines 7-27; and col. 4, line 63 through col. 5, line 20).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Please refer to PTO-892

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Revak whose telephone number is 571-272-3794. The examiner can normally be reached on Monday-Friday, 6:30am-4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 21, 2004

Christopher Revak

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